THE MOTOR AGE

THE AUTOMOBILE AUTHORITY OF AMERICA

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THOUGHTLESS PREJUDICE

"Time, the great healer"—and, it might well be added, the great blinder—makes the public accept as an inevitable and unremediable matter of course, many an evil of a serious nature. Time begotten conservatism and an incapacity for independent thought makes a very large proportion of the public look askance at innovations that threaten, even in the smallest degree, to upset the established order of things, even though it be to establish a far better order.

On these grounds, the various evils which are attributable to the horse have been accepted as inevitable and the advent of the motor-vehicle has, in very many instances, received scant attention or been condemned roundly on one plea or another. Often the condemnation has been made in all fairness, but—mark you—with all thoughtlessness also, thoughtlessness born of an inability or a disinclination to think independently.

Such condemnations are made with the thoughts solely on the disadvantages of the motor-vehicle, as compared with the

horse, and with no thoughts of the disadvantages of the horse. The horse is an old institution and its faults are overlooked. The motor-vehicle is new and its faults are considered legitimate subjects for criticism. The horse is old and its merits are accepted without question; the motor-vehicle is new and its merits are disregarded or grudgingly given consideration.

Thoughtlessly, in most cases, the motor-vehicle is made the subject of proposed restrictions by writers in the daily press of the country. Their writings have the semblance of fairness and serve only to root more deeply the prejudices of those who read them in the same thoughtless manner in which they are written.

A fair sample of this kind of writing is found in an editorial which appeared in the New York Times recently, under the caption, "Speed Regulations for Motor Vehicles." It starts out:

> Experience with the bicycle having shown very clearly that the average human being is so constituted that he has an insatiable passion for high speed which makes it extremely distasteful to him to go slow when he can possibly go fast, the public welfare would seem to demand that the right to use the streets for mechanically propelled vehicles should be restricted to those equipped with regulating devices which would make it impossible to run them beyond the statutory speed limit.
>
> The advent of the bicyclist created new conditions. The nearer the bicycle comes to the standard of a racing machine the more popular it is. A few staid or elderly persons ride carefully from natural caution or natural timidity, but the great majority of bicycle riders are young and athletic and love to "scorch" because of the pleasure and exhilaration of moving at high speed. Probably very few of those arrested and fined for reckless bicycle riding mean to violate the law, but they "just can't help it." A clear space ahead and no policeman in sight offers an almost irresistible temptation to "spurt."

Without stopping to argue the question as to whether it is right or wrong that the statutory speed limit for light, easily stopped, easily maneuvered bicycles should be the same as for horse drawn vehicles, it is impossible for the thinking man to fail to notice that the newspaper writer fails to advance any arguments to prove that it would be desirable to compel all bicycle riders to keep down to a speed of six to eight miles an hour—the usual statutory limit. He does not even state that it would be desirable, having, in all probability, never thought of the matter. As a matter of fact, even eight miles an hour is a very slow speed for a bicycle, and it is very doubtful if there be one regular bicycle rider in fifty that has not exceeded the statutory limit many, many times.

It may be, and doubtless is, a wise precaution to have the statutory limitation sufficiently low so that there need be no danger of failure to convict any rider who is caught riding recklessly. Still the fact remains, that, in the case of collision with a pedestrian or another vehicle, the bicycle rider and his bicycle almost always come off second best. The fact also remains that the proportion of accidents arising from the use of bicycles is far lower, proportionately, than arise from the use of horses.

The Times writer also fails to take cognizance of the fact that the amount of good that has come from the use of bicycles is far in excess of any injuries that they have worked; that the appetite for a greater speed than can be accomplished behind the family nag is an evidence of a desire for progress.

He fails to take cognizance of the fact that the law is not rigidly enforced, and should not be rigidly enforced, either against the riders of bicycles or the drivers of horses.

Continuing, he says:

> Now comes the automobile. It appeals to the popular fancy, because capable of propulsion at high speed, without serious risk of injury to itself, and certainly without discomfort to the inanimate propelling power. Makers of automobiles advertise them as racing machines, evidently realizing that they would have very little interest for most people who ride in their own vehicles if they could not be driven at high velocity when the conditions seem to permit. International races are organized to establish the fact that, in the hands of experts, railway speeds may be attained on ordinary roads. The best automobile seems to be the one which will cover most ground in the least time, with the least injury from wear and tear. That this is what most people want is evident from the fact that a slow and safe automobile would be as undesirable,

from the viewpoint of the buyer, as a Percheron draught horse for pleasure driving. Even those who expect to ride slowly and cautiously, and to keep safely within the law as to street speed, want to know that they can go faster than other people if they choose to. In this knowledge lies the danger; from it comes the irresistible temptation. Any observant person who will take his stand in mid-block on any one of our macadamized or asphalted avenues on a pleasant afternoon will see a great deal of perhaps unconscious automobile "scorching." Given a clear road—or one that for the moment appears to be clear—and a reserve of power which can be called into action by moving a lever, and the man who can resist the temptation to make his machine leap forward at a rate fairly comparable to that of the Empire State Express, is capable of great self-restraint. The oftener this perfectly natural temptation is yielded to the more firmly is the scorching habit established. It grows unconsciously, and becomes a grave public nuisance before we realize it.

In the paragraph just quoted, the writer displays his ignorance of the motor-vehicle, and his thoughtlessness, as well. Makers of automobiles do not advertise them as racing machines, and people do not buy them because they are racing machines. There are very few vehicles in New York City that are comparable in speed to the sixty-miles-an-hour of the Empire State Express. The very, very large majority of them are not capable of one-quarter of this speed, even under the most favorable conditions. Some few can go faster than this, but still not quite as fast as the Empire State Express. In the recent road race on Long Island, over the best course that could be found, the speed was less than twenty-five miles an hour, for the winner.

So much for the writer's ignorance. Now to his thoughtlessness.

Surely no one has any objection to the users of automobiles going as fast as they please, so long as their speed is not an element of danger to other people. At fifteen miles an hour, a motor-vehicle can be stopped in a shorter distance than a horse-drawn vehicle at eight miles an hour. At the same ratio of speed it can be more quickly maneuvered, occupies less space at all times, and can go where a horse-drawn vehicle can not go.

The element of danger arises from an inability to stop quickly when a sudden obstacle presents itself. Every motor-vehicle has from one to three brakes—usually two. How many horse-drawn vehicles in New York have one? Much might be said about the time necessary for the warning conveyed to the driver to be re-conveyed, by means of the reins, to the horse, who has then to stop both himself and the vehicle behind him, while, with the automobile, the stopping of the vehicle alone is accomplished by a less movement than the pull on the reins of the horse.

Is it fair, under these circumstances, that motor-vehicles should be confined to the same rate of speed that is necessary for horses? This aspect of the matter has never, apparently, occurred to the Times writer, who continues as follows:

> A warning of what to expect in the matter comes from Paris and from the towns and villages near enough to that capital to be reached by motor-vehicles, where there is just now an outburst of indignant public protest against automobiles from people who do not own them, coupled with demands for measures of protection for foot passengers which are somewhat extravagant—such, for example, as cutting trenches across roads at the entrances of towns and villages to force automobiles to slow down, suspending chains which cannot be passed, erecting gates at intervals, and other vexatious expedients. The chauffeurs have become so reckless, and are knocking foot passengers about at such a rate, that vigorous measures are demanded for the protection of life and limb. We do not need experience to teach us that something more than a municipal ordinance fixing the maximum speed at which motor vehicles may be propelled is needed to prevent the growth of an evil which, when once grown, will defy suppression and regulation.

Much of this is true. The volatile French have allowed the automobile to become a nuisance to a large part of the populace. Road races have been sanctioned. The automobile was the pet of the nation. Naturally abuses arose. The different character of the people of this country would not permit such abuse. The opposite situation is seen in England, where restrictive legislation has hampered the adoption of the horseless vehicles. France has just jumped from one extreme to the other. England is gradually becoming more and more friendly to the motor-car. In this country we have

shown neither a too great enthusiasm nor yet a too great conservatism. It may not be advisable to demand, until the public becomes better acquainted with the virtues of the motor-vehicle, a more lenient statutory limitation than is imposed on horse-drawn vehicles—but—in his unthinking anxiety for the public safety—read what the Times writer says about keeping the motor-vehicle within the statutory speed at all times.

Our suggestion is that every automobile run in New York shall be registered and licensed, and that the condition of such license be that it be fitted with an automatic governor, by means of which, when a certain speed is reached, the power is cut off or a brake applied, or both, thus rendering a velocity greater than that allowed by law impossible. Mechanically, this suggestion is entirely practical. To use a motor vehicle without such a governor could be made a misdemeanor, entailing penalties sufficiently serious to discourage violations of the law which, if charged, could be established or disproved without difficulty. The principle of the governor is too old and its applications are too well established in that "state of the art" to make such a requirement necessarily tributary in royalties to anyone. It would inconvenience only those who wish to break the law, and would be a safeguard and protection for those who do so involuntarily and unconsciously.

No statistics have been cited to show that the motor-vehicle is more dangerous than the horse or the bicycle, for the very good reason—if the subject ever occurred to the Times man—that the only statistics ever compiled on the subject would prove exactly the reverse—and in motor-mad France, at that. Arguments are also lacking.

Here is what statistics actually do show. The official figures for accidents caused by horse-drawn vehicles, railroads, bicycles and automobiles in France for the month of March are as follows:

	Killed.	Injured.
Horse-drawn vehicles	52	666
Railroads	13	30
Bicycles	5	70
Automobiles	4	48

The licensing of motor-vehicle drivers—not the vehicles, themselves—has been tried in Chicago. The license is granted only on the demonstration, by the driver, of his ability to handle his vehicle properly—and the greatest danger from the use of motor-vehicles arises from ignorance on this subject. No protest against this licensing has been made by the users of automobiles, in Chicago. The restriction is fair and no fair minded person will question it.

But for limiting the speed by governors—

Yes, it is a mechanical possibility—one of the simplest mechanical problems.

It would be equally simple to put it on horse-drawn vehicles and on bicycles.

Until the Times shall have shown that there is greater danger from the use of automobiles than from horses and bicycles, it has made out a poor case—and it cannot show any such excess of danger. If it takes the other side of the question the proof can be found.

This is but a fair sample of the treatment that the motor-vehicle is receiving and must expect to receive for some time to come, from unthinking writers.

And the evils for which the horse is accountable are forgotten or ignored. How much of the public taxes are eaten up every year in repairing the damage done by the iron-shod hoofs of horses? And how much damage does the automobile do?

How much filth is scattered around the streets and how much does it cost to remove it?

How much is left to be dried up and become powdered to dust and blown into the noses and mouths of citizens to cause disease?

How much is paid out for doctor's bills every year on account of diseases that are traceable directly or indirectly to the presence of stables in cities?

Would the maintenance of a pig-pen be permitted in New York City?

Why is not the owner of a horse indictable for maintaining a public nuisance? Why should he not be amenable to the health commissioner? Why should he not be compelled to provide diapers for his uncleanly beast?

These are matters of which the author of the Times screed has evidently not given thought.

FROM THE FOUR WINDS

CAUSED A MILD SENSATION

A lady automobilist caused a mild sensation in Chicago a few days ago. She was driving her electromobile east on Washington Street at the corner of State Street. She was a handsome woman and was dressed in the height of style in—whisper it gently—a costume that was so pronounced that, if it had not been correct in every particular, it might truthfully have been called "loud."

Now, while automobiles are no strange sight in Chicago, they are not so common that a handsome one driven by a striking woman is not enough to cause a considerable turning of heads. In fact, women, themselves, are not yet so common in Chicago that a handsome and strikingly costumed one will not cause more or less twisting of necks in this same locality of State and Washington Streets.

But to return to our fair chauffeuse. She dashed between an electric car and a cable train with the abandon of an old timer—in automobilism—but, just after crossing State Street, she brought her electromobile to a stop so sudden that the aristocratic pug dog, who sat, in his silver harness, on the seat beside her, was precipitated against the dashboard, to the great injury of his dignity, a circumstance to which his mistress seemed oblivious, however.

As stated, there was a mild sensation. Messenger boys stopped in their tracks; staid business men forgot their hurry and even the women shoppers delayed to see what was the trouble. The authoress of the excitement was blind to it all—apparently, at least. Letting go her hold on steering lever and controller, she deliberately raised her daintily gloved hands to the region of the upper terminus of her spinal column, performed some necessary adjusting of Titian locks, drew a veil down over her face and then took the steering lever and controller in hand, after administering a motherly pat or two to the injured pug, who had resumed his seat and composure, and started off.

Nobody looked at anybody else, but all remembered important business and started off as if making up for lost time, looking, it must be added, a trifle sheepish.

AUTOMOBILE CLUB'S TESTS

New York, May 19.—Acting President G. F. Chamberlin, of the Automobile Club of America, consented, today, to be interviewed by a Motor Age man and give his ideas on the conduct and character of the competitive tests suggested by him to the technical committee of the club, as impartially conserving the interests of motor vehicle handling and construction.

"If any ideas of mine," said he, "would be of value to Motor Age or aid at all in furthering the discussion of this proposed series of tests, you are welcome to them. Let me say, though, that I give them merely in the rough, with the idea that they may lay a foundation for further suggestion and with the realization that further discussion may greatly enlarge and considerably amend them.

"There should, in the first place," he continued, "be a proper classification of vehicles. Of course there should be electric, gasoline and steam classes, and these vehicles again should be subdivided according to weights and possibly still further according to types and forms. While in certain particulars all should submit to the same test, there are other particulars that must naturally be comparisons restricted to each separate motive power.

"All stopping and turning tests should be at the standard speed of twelve miles an hour, which is the maximum speed allowed in the city of London. A tachometer, or speed indicator, would show the gait traveled. In the stopping test the measure of the distance covered should be from a chalk line denoting the place for pulling in brakes. In the turning tests obstacles, both natural and artificial,

should be provided and the arc described in making the turn should be measured. There should also be a reversing test to indicate the time it takes to come to a stop, reverse and back into a five mile an hour speed. These tests should be made over macadam roads like Riverside Drive, asphalt like the Boulevard, and cobble stones and trap blocks to be found anywhere in the city. Electric, gasoline and steam vehicles should all undergo these tests.

"Gasoline vehicles should be tested as to consumption of fuel, water evaporation and, perhaps, Prof. Thurston, of the Technical Committee, might measure the horsepower required to accomplish various things.

"In grade climbing tests the kilowatts the electrics consume, the amount of water evaporation per horsepower-hour or per mile of the steam carriages and the gasoline used by gasoline vehicles should all be determined.

"One great advantage of all these tests will be to deduce a safe rate of speed for automobiles. In London, even with its congested traffic, twelve miles an hour is not considered excessive speed for public safety. In discussing the question of the automobile on the public highways the critics forget that a motor vehicle is not half the length of a horse and carriage, and that, if 5,000 horses and carriages can pass a given point in a given time, then 10,000 motor vehicles can pass that point in the same time."

The interview then drifted into other channels.

"This tendency toward a very general use of motor-vehicles for business, convenience and pleasure will doubtless also diffuse a knowledge of elementary physics," said Mr. Chamberlin, in reply to a suggestion of the possible influence on public school education toward primary instruction in mechanics that automobilism would have.

Racing and time tests on the public highways were then taken up.

"There is nothing at all in the story of the interference of the Long Island farmers with motor-vehicle riding in that district," said he. "We automobilers, while we propose to enforce our own rights in the roads, have no desire to go contrary to the law, or even the reasonable wishes of the public. In fact, the matter of restriction of road racing by the members of our club will shortly be brought up and we shall doubtless adopt a restriction similar to that appearing in the laws of the Automobile Club of Great Britain. In other words, we shall punish in some effective way those of our members engaging in runs or time tests on the public roads contrary to the prohibition of the local authorities."

AUTOMOBILE CLUB RUNS

New York, May 19.—Vice-President Chamberlain and Mr. Schwarzkopf were the only members to appear at Astor Court this morning in the face of the driving rain storm for the run to Tarrytown, and so it was very excusably abandoned. It was a sad disappointment to the chauffeurs, as sixteen vehicles had promised to go and luncheon had been ordered for twenty-six at Tarrytown.

Through the courtesy of Highway Commissioner Budd, of New Jersey, the route of the club run to Philadelphia on June 2 has been finally determined. The chauffeurs will leave South Ferry by boat for Staten Island, thence to Tottenville by the South Shore road and to Perth Amboy by ferry. The route will then be on the new state road to New Brunswick, thence fourteen miles over fairly good roads to Princeton for luncheon, thence to Camden via Bordentown and Burlington, and by ferry to Philadelphia. All the Jersey highways traversed will be fine state roads except those between New Brunswick and Princeton.

Some of the members will "mote" to Atlantic City on Sunday and others will return via Hightstown over another state road, though the return will be informal.

The club is in correspondence with the Automobile Club of Philadelphia with reference to the trip.

MOTOR VEHICLES IN JAVA

Washington, D. C., May 19.—Information has been received here to the effect that there are at present only three au-

tomobiles on the island of Java, and they are of European make and very heavy and clumsy. Java is said to be an ideal country for automobiles, as the roads are fairly good and flat, and the climate is ruinous on horses. A really good Australian horse, the only kind fit to own in Java, quickly succumbs to the climate, and the only alternative, if one wants an animal that will last some time, is the ugly little sandalwood pony, which no one in this country would care to be seen driving. The automobile, therefore, would solve the problem of transportation, and it is quite sure that if Americans do not secure the Java market the French will. Any business man knows that to secure a virgin market is much easier than to wrest one from some one else who is well established.

"Suppose the automobile does take the place of the horse," said a prominent Bostonian to a group of newspaper men recently, "then all the men who curry horses and do chamberwork around stables will be out of jobs, and a lot more men who are handy with tools will be in jobs as machinists. This latter work will be done in the city instead of the country. It is a part of the tendency of the times to shift work from the farms to the shops of the city. As the automobile displaces the horse, there will be more need for gasoline and less for oats. The inventions are putting the farmer out of business."

A CHANGE OF FRONT

Paris, May 10.—Le Petit Journal, having the largest circulation of any paper in France—more than 500,000 copies a day—was the first and noisiest in the denunciation of the accident in the Paris-Roubaix race and in the condemnation, in general, of the manner in which automobile drivers were allowed to disregard the convenience and safety of others. Now this influential journal has taken another stand. In the course of a long article it says:

"We are not afraid to protest loudly against speed abuses which menaced the security of people on foot and in carriages, but, after having been the first to sound the alarm, and to denounce the peril, we do not desire that necessary restrictions be transformed into unjustifiable persecutions or that the innocent should be made to suffer for the guilty.

"Today public officials seem disposed to see how far they can go in imposing oppressive measures, which not only hurt every person who owns a motor-vehicle, but which, at the same time, work an injury to an industry from which thousands of workmen gain a living, directly and indirectly. This industry has taken deep root in France and it is in France, alone, that it has become a national industry. We do not wish persecution to force it to move to other countries, which will be only too glad to get it and get rich in it, while they see our manufacturers ruined.

"We therefore think that the speed of twenty kilometers (12½ miles) an hour in cities and thirty kilometers (18¾ miles) an hour in the country are reasonable limits.

"It is unreasonable to say that automobiles which are provided with strong brakes shall go at a speed of only eight kilometers an hour, while the horse-drawn cabs of Paris are permitted to travel at fifteen or sixteen kilometers, when these same cabs have no brakes at all, nor any other means of making a quick stop. Accidents are caused by runaway horses every day and yet public officials never pay any attention to the question of restrictions for them.

"We consider that it would be sufficient to impose such restrictions as we have already outlined and to abolish the use of the unmelodious horns on automobiles, the absence of which would compel automobilists to look out for other people, not depending on the squawk of their horns to clear the way.

"Let us hope that the authorities, while enforcing the old rules, which are sufficient, will not make the innocent suffer with the guilty and will not work an irreparable injury to this national industry."

So much for the new stand of the periodical that was largely the cause of the present "war on automobiles," as it is everywhere characterized.

The French Cycle and Automobile

Board of Trade recently held a protracted meeting at which a committee was appointed to present resolutions which were adopted at the meeting to the authorities. These resolutions cover the case in much the same manner as it is covered by Le Petit Journal.

Viewed from a disinterested standpoint, it looks as if a reaction were setting in and that, in the end, the result of all the agitation will be merely the abolition of permits for road races, which were run as if no one had any rights that had to be observed, except the mere competitors and officials, and a general decrease in reckless driving, without curtailing, for any length of time, the liberties of automobilists or doing any great harm to the industry. The attacks on the motorists have been so savage and so illy directed that there was bound to be a reaction.

This is the way all things are done in France. We submit to indignities that would be permitted in no other country and then we rise in indignation to punish those whose offenses we have invited, beyond all reason. Then our indignation overreaches itself and we repent and lay ourselves open to fresh indignities.

AUTOMOBILE FUNERAL

Buffalo, May 21.—The rather singular scene of a funeral cortege made up of automobiles was witnessed several times last week. Owing to a strike among the hack-drivers of the city the early part of the week it was impossible to secure carriages or drivers and the several public autos were pressed into service both as hearses and for conveyances for the mourners.

PHILADELPHIA AUTOMOBILE CLUB

Philadelphia, May 21.—The recently formed Automobile Club of Philadelphia last week elected the following officers to serve for the ensuing year: President, Henry G. Morris; vice-presidents, Herbert Lloyd, Pedro G. Salom, J. Horace Harding; secretary-treasurer, Frank C. Lewin; board of governors, G. Jason Waters, Robert E. Glendinning, W. W. Gibbs, John L. Wilson, Henry G. Morris, Herbert Lloyd and Frank C. Lewin. At the meeting the committee in whose hands was placed the plan to open an automobile stable in the center of the city reported progress. An incomplete census of local automobilists showed that there are now in this city fifty-three persons owning and operating pleasure vehicles, of whom forty-two are members of the new organization. Arrangements were made for the reception of the Automobile Club of America on the occasion of its run from New York to this city on Saturday, June 2. Later in the season a return run from this city to the metropolis will be arranged. An automobile parade, the first ever held in this city, will also shortly be held under the management of the new club.

PENNINGTON'S MATRIMONIAL VENTURES

The report that Edward J. Pennington, the airship man, who is reported to be worth in the neighborhood of a million dollars, and who intends to marry Mrs. Marie Alice Durant, of Milwaukee, soon, has attracted considerable interest at Frankfort, Ky., says the Louisville Courier-Journal. Pennington's first wife was a Frankfort woman and both she and her husband are well known there. She was the daughter of Edward Butler, a plasterer of that city, and her relatives are among the most estimable people of the State Capital. Pennington, according to local rumors, deserted his wife in Cincinnati several years ago. He went to England and there he is reported to have made big money. Mrs. Pennington went to England to visit her husband and tried to regain his affections, but instead it is said that the airship man greeted her with a proposition to give her a neat sum of money if she would join in a petition for divorce. The plucky little woman spurned his offer and returned to her children at Glendale, near Cincinnati. Pennington's experiments with various patents in England continued to be successful and when he returned to New York he was met there by Mrs. Durant. After a conference the latter went to Cincinnati and attempted to open negotiations with Mrs. Pennington so that she

might marry the airship promoter. Mrs. Pennington has recently moved to Chicago and her friends here know nothing of the progress of late events concerning the differences between her and her husband.

Mrs. Durant is very wealthy and has been interested with Pennington in his automobile and other devices which he has floated with success.

OPENING PHILADELPHIA'S PARK

Philadelphia, May 21.—Eight months ago the owners of self-propelled vehicles in the Quaker city were given permission to use certain of the less frequented drives in Fairmount Park, subject to specified conditions. They were placed on their good behavior—if any accidents resulted from this leniency on the part of the park commissioners the privilege was to be withdrawn. There were no mishaps, and twice since the entering wedge was inserted has it been given a resounding thwack, the result in each instance being the addition of a substantial bit of road to the rather limited stamping ground of the law-abiding Quaker horseless vehicle, including the two main entrances to the popular pleasure ground—Green and Diamond Streets.

So absolutely harmless have our Quaker autos proved themselves to be that even the horses are casting loving eyes at them, and now the local papers are bestirring themselves to secure for Philadelphia's motorists—among them several of the city's largest taxpayers—the right to use any and every part of the extensive system of park roads at their own sweet wills. And they are laying the situation before the people and the commissioners in such a favorable light that their efforts are bound to be crowned with success ere long. Last Thursday The Inquirer devoted half a page to the subject, printing a large map showing the comparatively limited opportunities local automobilists have of enjoying the beauties of the park. Several interviews with members of the commission were published, among them one with ex-Mayor Stokley, who said, among other things: "I own horses and drive in the park every clear day, and never has one of my horses been frightened at an automobile; nor have I seen any other man's horse scared by them. To tell the truth, I do not believe the park commissioners have any right under the law to exclude self-propelled pleasure vehicles from the people's pleasure ground, and I believe that a test case fought out in the courts would bear out my assertion. Automobiles are operated in Broad Street in great numbers day and night, and that highway is frequented by many more drivers of horse-drawn vehicles than even the most frequented of park drives, yet I have failed to hear of any disasters on that thoroughfare. This one fact, to my mind, disproves the assertion that the automobile is a menace to public safety. To hold that the park drives, or any of them, shall be for the exclusive use of horse-drawn carriages, or bicycles, or any other form of vehicle, is, in my opinion, class legislation, and therefore unconstitutional. Our park was designed for the use of the people, and is maintained at public expense, and the man with the automobile, being a taxpayer—and a heavy one, at that, in most instances—is as much entitled to enjoy its beauties as the man with the horse or the man with the bicycle. I for one am willing to do all I can to secure equal rights for automobilists, and when the subject comes up before the commission again I am going to vote for opening the entire park to them, subject only to the restrictions governing the use of vehicles in general."

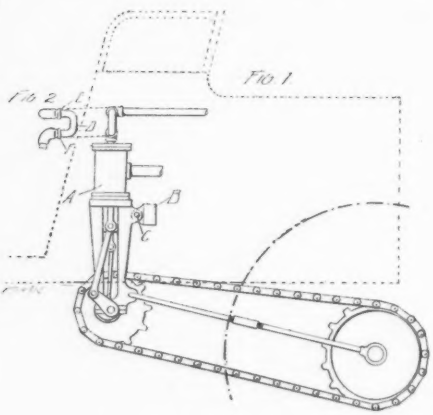
Similar views were expressed by ex-Judge Samuel Gustine Thompson, also a member of the park commission. He intimated that the present restrictions were arbitrary and that the automobilist, as a taxpayer, undoubtedly has a right to the free and unrestricted use of the park, which a portion of his taxes goes to maintain. The matter of opening the entire park to automobiles will undoubtedly be brought up at next month's meeting of the park commission.

WEEKLY PATENT OFFICE BUDGET

MASON'S ENGINE MECHANISM

Letters patent No. 649,667 to William B. Mason, Boston, Mass.; means for mounting and connecting the motor of steam carriages.

The essence of Mr. Mason's patent con-



Mounting of Mason's Engine.

sists in mounting his vertical steam engine A (see Fig. 1) on a cross-piece B, which is rigid with the body of the carriage, by means of pivots C, fitted in suitable lugs on the engine A and the cross-piece B, so that the engine can be rotated slightly about the pivots C, to allow of the taking up of the slack in the transmitting chain and for the action of the springs. To further accomplish this result Mr. Mason provides a U-shaped joint D in the feed-pipe of the engine, which is connected with flexible couplings E and F (see Fig. 2), to permit the slight rotation of the engine without straining or breaking the feed pipe.

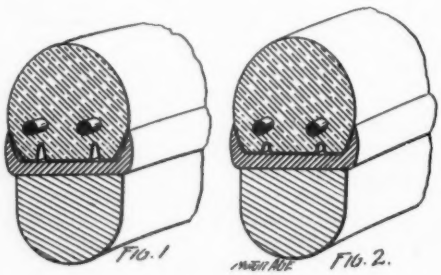
Three fairly strong chains are allowed.

FAIRCHILD'S TIRE CONSTRUCTION

Letters patent No. 649,721 to Frank F. Fairchild, Cleveland, Ohio; vehicle tire construction.

The invention relates to solid rubber vehicle tires. In the specifications the inventor says: "In this class of tires, as heretofore constructed, it has been found impossible to draw the retaining bands or wires so tight that in time dirt or gravel would not work under the tire, and this, as the tire creeps around the rim in running, abrades its under side, soon wearing out the canvas protection. As the wear increases the tire becomes correspondingly loose and the slippage becomes greater, and this soon wears loose the openings in which the retaining wires or bands lie. Now, to make these tires fill the channel, end compression has been relied on, this compression varying from one-half to one and one-half inches to the foot; but as the tire becomes loose this compression reacts to extend the tire, leaving large gaps between it and the channel, with the result, that, not infrequently, the tire becomes wrenched out of the channel entirely while running over car-tracks, for example, or around curves. Moreover, as the tire begins to wear loose, it travels back and forth sidewise in going around curves and becomes smaller than the size required to fill the channel, wherefore it is impossible to materially help the tire by resetting."

To overcome the objections which he finds in other tires, Mr. Fairchild provides two grooves in the inner portion of



Fairchild's Tire.

the tire, beneath the retaining wires. In cases where the fit of the tire to the rim is not good, as shown in Fig. 1, the wires are tightened and the presence of the

grooves makes the tire assume the shape shown in Fig. 2. The tires, according to the specifications, can be made to fit again, after wear, by retightening the wires.

Four claims are allowed.

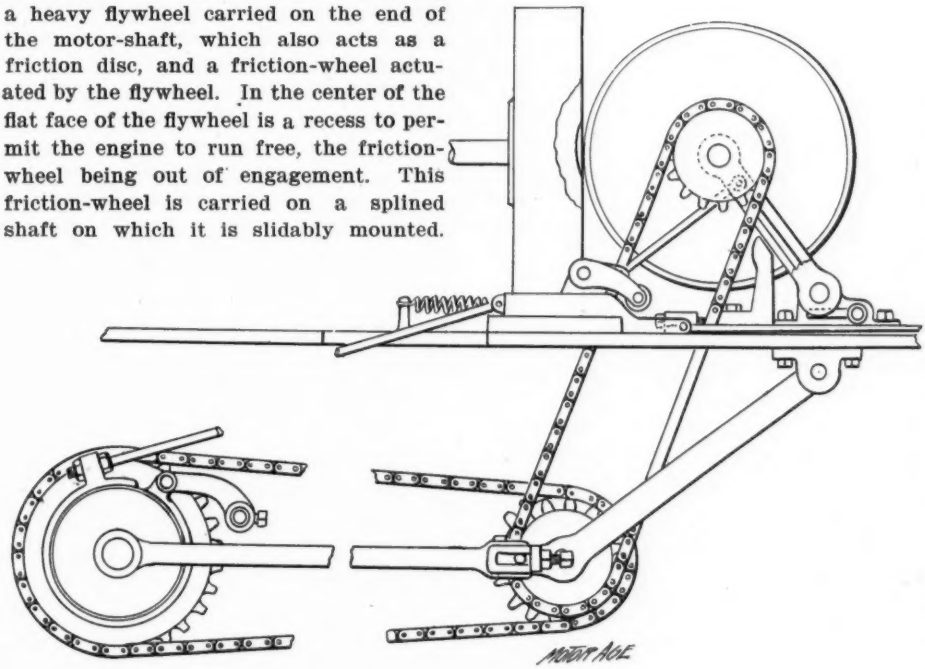
GAY'S FRICTION TRANSMISSION

Letters patent No. 649,689, to Rubert M. Gay, Cambridge, Mass., assignor of one-half to William H. Ricker, same place; friction and chain transmission.

There are some points of considerable merit in this device. The accompanying illustration is a side elevation, showing a heavy flywheel carried on the end of the motor-shaft, which also acts as a friction disc, and a friction-wheel actuated by the flywheel. In the center of the flat face of the flywheel is a recess to permit the engine to run free, the friction-wheel being out of engagement. This friction-wheel is carried on a splined shaft on which it is slidably mounted. Moved to one side of the center of the flywheel is gives a forward motion to the vehicle and to the other side a backward motion. The power transmitted by the friction-wheel to its splined shaft is conveyed, by means of chain and sprocket-wheels, to an intermediate shaft and thence, again by means of chain and sprocket-wheels, to the revolving axle of the driving wheels of the vehicle.

The splined shaft and the intermediate shaft are each supported by arms which are pivoted at nearly the same place so that the tension on the chain connecting these two shafts will tend to draw the two shafts toward each other, and, in so doing, will draw the friction-wheel against the flywheel which actuates it. The greater the strain on the transmission gear, the stronger will be the pressure with which the friction-wheel is held against the fly-wheel.

The band brake is actuated by a pedal, and, simultaneously with the application of the brake, the friction-wheel is thrown out of contact with the flywheel, whatever their relative positions.



GAY'S TRANSMISSION MECHANISM.

The mechanism by means of which the friction-wheel is shifted along the flywheel is so arranged as to prevent the friction-wheel from crossing the center of the flywheel unless a dog is first released, preventing a too sudden reversing of the driving mechanism.

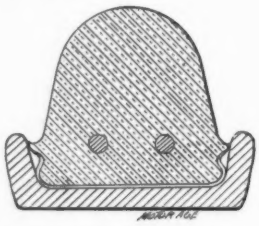
Nine claims are allowed, which, how-

ever, do not insure any very strong protection.

SWEET'S TIRE CONSTRUCTION

Letters patent No. 649,775, to John M. Sweet, assignor to Frank Richardson, trustee, same place; tire for vehicle wheels.

Mr. Sweet believes, that, by having a recess between the tire and the edge of the channel rim, he will allow lateral yielding of the tire and prevent creeping. As he does not vouchsafe any reason why lateral play is desirable and provides other means, in the shape of recesses in the bed of the channel rim, to prevent creeping, it is difficult to see any value in his invention.



Sweet's Tire.

For what he has, two rambling claims are allowed.

THE EASTMAN AUTOMOBILE CO.

The Eastman Automobile Co. of Cleveland makes its bow to the public in a neat catalogue just from the printer's hands. The company is incorporated under the laws of the state of West Virginia and is officered as follows: H. F. Eastman, president; F. M. Mills, vice-president; L. C. McLouth, secretary and H. Jay Hawes treasurer and general manager. Mr. Eastman is an old bicycle man, formerly with the Winton Bicycle Co.; he has spent the past three years in experiments with automobiles and he has secured a number of patents covering various improvements in vehicle construction. Mr. Hayes was also identified with the bicycle trade, having been branch manager in Cleveland for the Grand Rapids Cycle Co. The company has its headquarters at 416 Superior Building and its factory at the corner of the C. & P. Railway and East Prospect Street, Cleveland.

Mr. Eastman has experimented extensively with both electric and steam vehicles and will build both types eventually, although for the present the latter will be pushed. The following information is furnished by a member of the company:

The Stanhope, illustrated herewith, will be the leading model, and, with steam equipment, it weighs about 800 pounds. Power is furnished by compact two-cylinder upright engine of the marine type, with link motion for reversing. It has a two-and-one-half-inch bore and three-and-one-half-inch stroke and develops five horsepower. The boiler is of the upright tubular type, fifeen inches in diameter and nineteen inches high from the bottom of the burner to the top of the hood. It furnishes a steam pressure equal to the needs of the engine under all conditions and it has been tested up to one thousand pounds to the square inch. The water supply is regulated with glass water gauge to show water stage in boiler at all times. The boiler and engine weigh 170 pounds complete.

The fuel supply to burner is automatically regulated by pressure diaphragm. The burner combustion is claimed to be perfect, giving forth no noise or odor. Fuel and water supply can be carried for a continuous trip of from sixty to seventy-five miles, according to road conditions.

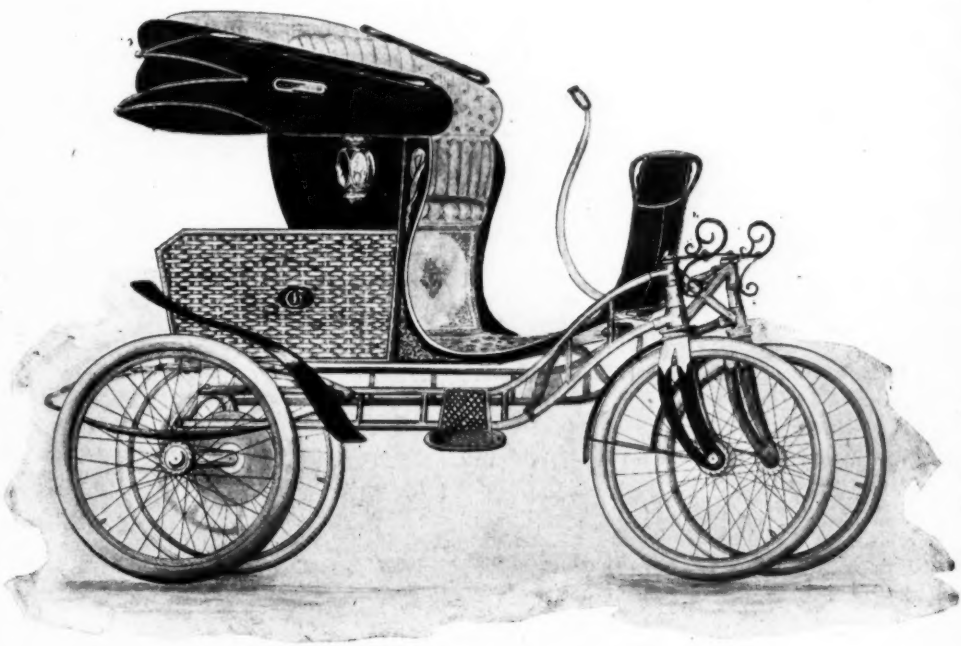
The steering device embodies a principle that enables an operator of this vehicle to ride for miles literally "hands off," it being necessary to use the steering lever only when it is desired to part from a straight line. This is accomplished by carrying out the idea universally used

in bicycle construction of bearing directly upon an oscillating front fork which, as is well known, will follow a straight line when the weight is properly balanced. This is a feature which will be appreciated by those who have operated vehicles where it is necessary to exercise a constant strain in maintaining a straight course.

The power transmission is by chain and sprocket to the rear axle, with differential gear and powerful band brake. An eccentric device permits the tightening of the chain.

One of the strongest features claimed for this vehicle is the construction of the body, which is said to be covered by patents. It is made of sheet steel backed by an asbestos covering, which retains the heat and muffles any possible noise, making a practically indestructible body which will not crack or warp and which admits of a high finish that can be baked on the same as in finishing bicycles, making it also possible to re-enamel in new colors in a few hours, while in ordinary carriage painting a number of days are necessary to secure a good finish. The fact that this finish will not blister under a high heat is one which will be appreciated by owners of steam vehicles.

It is claimed, that, if desired, the Stanhope can be geared up to forty miles an hour with perfect safety. The price, with complete equipment as shown, is $1,000.



EASTMAN STEAM VEHICLE.

MOTOR CAR CLUB COMPETITIONS

The honorable secretary of the Motor Car Club of London writes to the Motor Age, calling attention to the prize competitions of the club for special inventions for motor-vehicles. The club, some time ago, announced that it would give cash prizes to the extent of $3,000 for a deodorizer for gasoline vehicles; an automatic starter; an ignition device; and a simple, cheap, complete vehicle.

The competition, although not of direct interest to inventors of this country, is still interesting as showing one of the various lines in which a club can foster the industry. For this reason the following details, extracted from the circular which the club is sending out, are given:

History of the Club

The Motor Car Club, which was formed in May, 1896, to safeguard the interests of self-propelled traffic and assist in its development, is the senior body of its kind in Great Britain.

From its inception, the Motor Car Club has played an important part in the birth, use, and evolution of horseless vehicles. Under its auspices, the first motor car exhibition was held at the Imperia Institute, July to September, 1896, which was the means of first bringing the motor car directly under the royal patronage, and by securing the attention and approval of numerous members of both houses of parliament, largely assisted in the passage of the act which gave life and (comparative) freedom to the new means of locomotion, on August 14, 1896. Three months after it became law, the Motor Car Club organized and successfully carried out the never-to-be-forgotten run to Brighton on November 14, 1896, which caused so widespread a sensation, and the fourth annual demonstration of which—held November, 1899, when out of the 104 motors which crossed Westminster Bridge, ninety-five arrived at Brighton—was the greatest proof of the practical utility of the motor car ever given, and a gathering of horseless vehicles no other body in this country has ever brought together.

In many other ways the Motor Car Club has helped to promote the trade, pastime and sport of motor-carring. Practically, all motor-cycle racing is held under its rules, and it has spent large sums in promoting all sections, and now, with a view to encouraging inventors, it offers 600 pounds for the further improvement of motor cars by public competition in inventions, the conditions of which are appended.

Conditions of Competition

1.—The competitions and prizes are open to all inventors in the British Empire.

2.—Entries, which must be made in writing, close on September 1, 1900, to the Honorable Secretary Motor Car Club, 40 Holborn Viaduct, London.

3.—All cars, models, drawings of patent specifications, etc., must be deposited by September 30, at such place as may be arranged for the exhibition to take place.

4.—There is no limit to the date of the inventions. They may be fully patented or provisionally protected.

5.—Special protection for all new inventions will be afforded by the Board of Trade, in order that the exhibition of their inventions shall not be prejudicial to their interests in obtaining extended or foreign patents.

The sectional rules governing the competition for each of the four divisions in which prizes will be awarded are as follows:

I—Deodorizer

1.—The apparatus employed should be light, and capable of being attached to existing motors.

2.—If the apparatus be used in connection with, or in addition to, the silencer, in order to further reduce the noise of the explosions, it will be a considerable recommendation in its favor.

3.—Chemical or other means may be

employed, but no dangerous substances must be used, and droppage of waste substances must be entirely avoided or reduced to a minimum.

4.—Cheapness and simplicity of attachment will, after efficiency, be important elements in guiding the awards.

II—Automatic Starter

1.—The "automatic starter" must enable the driver, without undue exertion, to start the car from a stationary position.

2.—The starting handle, or lever, must be within easy reach and manipulation of the driver when occupying his customary seat.

3.—It will be an additional recommendation if the "automatic starter" can be adapted to existing vehicles.

4.—It must not cause any addition to the vibration or working of the motor when the car is at rest.

5.—Simplicity, cheapness and lightness will be, after efficiency, points in its favor.

III—Ignition

1.—The ignition must take place within the combusion chamber.

2.—If electricity be employed, it must be self-contained, and independent of batteries or accumulators, and be free from any connection or frictional contact with the machinery of the motor which causes perceptible loss of power.

3.—Whatever form of ignition be employed, it must be reliable and regular at whatever speed the motor be running, and, if electric, controlled from the driver's seat.

4.—The parts ought to be easily got at, cleaned, and renewable.

5.—The system to be adaptable to the ordinary motors in use.

6.—The system of ignition employed must be free from danger of fire or explosion, both when running, at rest, or in case of accident.

7.—Simplicity, lowness of cost, and adaptability will, after efficiency, be points in its favor.

IV—Simple Cheap Car

1.—The motor car must be as simple in details and construction as possible with regard to its practical efficiency.

2.—The motor car must carry at least two persons, side by side.

3.—The horsepower to be sufficient to propel the car with two passengers up a gradient of one in nine at five miles an hour, and capable of averaging the legal limit (twelve miles an hour).

4.—Must be fitted with not less than two forward and one reverse speed.

5.—The working parts and car to be of such a nature that they can be reproduced in large quantities at a minimum cost.

6.—The motor and all working parts must be accessible and efficiently protected from dust, mud, and the weather.

7.—The car to be so constructed as to be capable of being driven not less than fifty miles without a stop.

8.—Simplicity, lightness and lowness of cost, after efficiency, will be the chief consideration.

Hints and Comments

These contests are designed to give British investors some tangible encouragement to bring forward not only their existing inventions, but to devise new ones to meet the special requirements here set forth, and for which substantial cash prizes are now offered.

What the public look for is a cheap and efficient car. The ideal is a light-built, easy-running motor-car to sell at 150 pounds.

It is of essential importance that the working parts should be as few in number as possible, both to save cost and render examination and manipulation easy, and replacement cheap, more particularly to the comparatively inexperienced owner. At the same time, the more delicate parts ought to be strongly made, so as to reduce likely damage from wear and tear at the lowest point.

Other Inventions

Other inventions outside the scope of those put forward may also be sent in, and if considered of sufficient merit, special extra prizes will be awarded.

The fact of entering and exhibiting in no way interferes with the patentees' rights, but will most likely lead to a profitable sale thereof.

Information on any other point will be gladly and freely given by the Honorable Secretary of the Motor Car Club, 40 Holborn Viaduct, London.

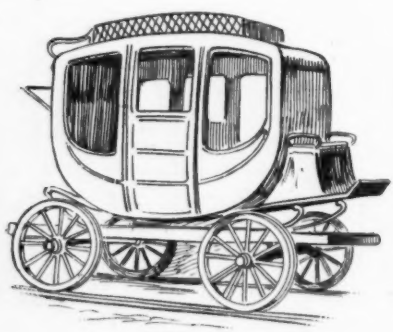
A PROPORTION IN EVOLUTI

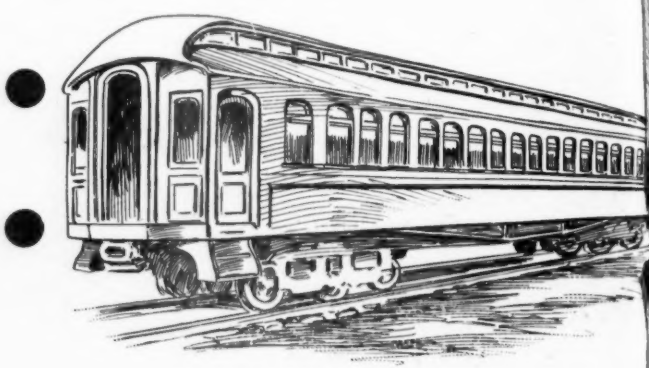
There are men alive today who can remember the time when all the railroad coaches looked like the stagecoaches which we were wont to see in story books of "ye olden times." In fact, when railroads were first introduced, they were what the automobile is today, mere substitutes for horse-drawn vehicles—substitutes which promised much in the way of economy. Those coaches were merely ordinary horse-drawn stage coaches, with only such changes as were necessary to adapt them to run on rails instead of on ordinary wagon roads.

As a matter of history, builders of the first railroad coaches were as slow in changing the first patterns of their cars as automobile manufacturers are now. The old Harlem & Hudson Railway coach was nothing more than the box of a stagecoach lifted from wagon wheels to car wheels. Even the postillion's seat in the rear and the driver's seat in front were retained and both occupied by passengers who preferred to ride outside. The four windows of the stagecoach were also retained, and when the coaches passed along the way, pulled by a locomotive, the thought was, as now with the automobile: "Where are the horses?"

The stagecoach style of railroad coach prevailed from the time of the first construction of a railroad in this country until after 1850. The west was the first to distinctly break away from the style. The old Galena & Chicago Union Road adopted the square box cars with diminutive platforms at each end. But the ornamental, highly finished railroad coach of today did not become an accomplished fact until long after George M. Pullman built his first sleeping car. The modern passenger car, while an evolution from the stagecoach, was finally designed and accepted by all the railroad companies without any reference to the ancient plans on which road coaches were made.

The first quantity in the illustrated proportion shows the old stagecoach mounted on wheels adapted to run on rails as it was fifty years ago; the second quantity shows the railroad coach as it is today. If half a century of progress has made such a change, what, then, must be expected of the automobile of fifty years hence—nay, of a decade hence, for engineering is now progressing with giant strides?





Motor-vehicle manufacturers in America have had a more than sufficient task set them to provide the proper motive power and to solve the various problems of transmission, differentiation, and steering, in which the motor-vehicle must, of very necessity, differ from the horse-drawn carriage, and it is not strange that the question of making the bodies of their vehicles suitable to the coming order has not received much attention.

Aside from the question of deciding which is ultimately the most desirable form for the body of the motor-vehicle to assume, there is the question of satisfy-

LUTION—AN UNSOLVED PROBLEM

ing public prejudice. The public, accustomed as it is to the present shape of the horse-drawn road carriages, would look askance at any very radical innovations when those carriages are provided with their own motive power. Regardless of mechanical efficiency, of safety or of comfort, the automobile must, for the present, adhere comparatively close in outward appearance to the present horse-drawn carriage.

Everyone knows how the present horse-drawn carriage looks but few have stopped to ask why it looks as it does.

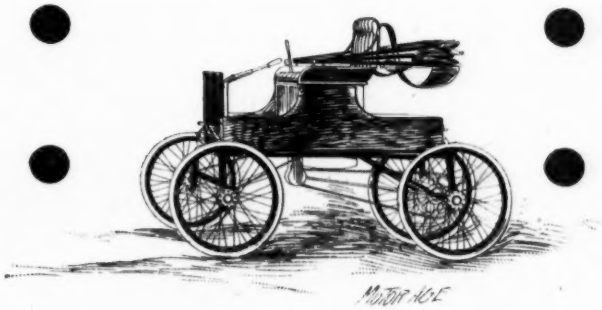
And why does it?

The reasons are not far to seek. It must be high from the ground to seat the passengers where they can have a view over the horses' backs. The wheels are large to give it this height, and—not being provided with rubber tires—to give as little vibration as possible. The vehicle is cut under—often—to permit the front wheels to assume the proper angle in making turns. The front wheels are made smaller to avoid the body and permit this same turning. The dashboard is placed in front to make a fence between the horse and passengers.

There are exceptions which prove these general rules. The coupe and pleasure vehicles in which the passengers prefer comfort and protection from the weather in preference to air and view, have their bodies placed closer to the ground; the driver, being seated high enough to need no fence between him and the horse, there is no dashboard.

Turning our attention to the motor-vehicle, these reasons disappear. There is absolutely no necessity for a dashboard, as it is used in horse-drawn vehicles and automobiles of today. There is certainly no reason for having it assume the shape of an iron fence covered with patent leather. But of this, more later on.

There is no reason for having the vehicle set higher from the ground than is necessary to avoid obstructions. There are reasons for the reverse. The closer to the ground it sets, the greater the ease of mounting and dismounting, and, what is of far more importance, the greater will be its stability. At the higher speeds of which motor-vehicles are capable, this matter of stability is of utmost importance. The motor-vehicle has greater weight to carry than the horse-drawn vehicle, and the higher the body, the less will be the stability, regardless of increased speeds.



The motor-vehicle must have stub axles to the front wheels and those wheels can, therefore, be given a very considerable angle before they will touch the body—as great an angle as is ever necessary. Therefore there is no need of under cutting the body and no sense in so doing.

There is no necessity for having large wheels to give height, and, with rubber tires, none on account of vibration. Considering the additional stresses that the

driving wheels have to stand, there are many reasons why they should be made small—stresses arising from both their increased number of functions and the additional speed of the vehicles to which they are attached.

There is absolutely no reason why the front wheels should be smaller than the rear wheels. If there should be any difference in size between them, the front wheels should be the larger. They are best, however, when the same size.

Common sense, and mechanics, therefore, decree that the motor-vehicle should have comparatively small wheels, say thirty inches in diameter, and should set low.

As to the dashboard, again. There is no need for a fence between the passengers and a horse that is not present. It may be, and doubtless is desirable, to have some sort of "front." The sort of front, however, presented by a straight iron fence covered by patent leather, is neither artistic nor useful. To avoid, as far as possible, the item of atmospheric resistance, the front should be pointed, or at least curved. Considering the aesthetic features, it does not make an attractive vehicle to have all the necessary machinery contained in a box behind. It gives an illy proportioned look. Even if all the machinery is to be contained at the rear, it would give a better appearance to the vehicle to have a box, or boot, in front, for the reception of packages and wraps. However, the mechanical features will be better conserved by having a portion of the machinery located in the front. It will give a better distribution of weight and will take a considerable amount of the already too great strains off the rear wheels.

All this is merely in the way of suggestion. The public would not take readily to a vehicle that departed too far from the horse-drawn vehicle, just at present. On the other hand, it may be set down as certain that the motor-vehicle of today will be looked upon in a few short years as a poor makeshift, a discarded experiment and an obsolete monstrosity.

The railway coach of fifty years ago is to the railway coach of today as the motor-vehicle of today is to the motor-vehicle of a decade hence—an unknown quantity, until time and experience have worked out the proportion.

TO AND FROM EDITOR AND READER

WANTS HEAVY RUNNING GEAR

Editor Motor Age:—

I would like to know where I can get a vehicle frame with jointed front wheels that will hold up 1,500 pounds to a ton, or where I can get the castings for the hinged front wheels. I could make the rest. I want to construct a wagon to haul milk to a creamery. I can not find anything heavy enough now. Besides I have a patented wheel that I wish to try

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NOTE—To make clear the functions of this department of the Motor Age which has become a fixture, under the above caption, the editor begs to state that all subscribers of the paper are at full liberty to take advantage of it to ask any and all questions pertinent to the scope of the paper, which questions he will answer to the best of his ability, either in print or by personal letter—the former when the questions are of such a character that they or their answers may prove interesting to the general reader, and the latter when such is not the case.

Communications of a character generally interesting are also welcome.

To receive attention correspondents must sign their names and addresses, which, however, will be omitted from published letters, if the correspondent so requests. It is the editor's desire, however, to make this a department in which readers of the Motor Age will feel glad to come before the motor-vehicle public without concealment.

The editor will be grateful for the correction of any mistakes that may creep in, as well as for suggestions from readers, whether pertinent to this department or other portions of the paper.—Ed.

on the rear axle.—Clarence Grosecose, Sylvia, Kansas.

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The number two running gear sold by the Automobile Supply Co. of St. Louis should be heavy enough for your purposes. The Grant Axle & Wheel Co. of Springfield, Ohio, make an excellent guiding hinge for the front wheels of motor-vehicles, fitted with roller bearings, as well as rear axles. The following firms make a specialty of automobile forgings and any one of them can doubtless furnish you the forgings you need: The Van Wagoner & Williams Hardware Co. and Joseph Dyson, both of Cleveland, Ohio; Peter Forg of Somerville, Mass.; and the Billings & Spencer Co., Hartford, Conn.—Ed.

ADDRESSES SUPPLIED

Editor The Motor Age:—

I saw in one of your December numbers a cut of a "Stanley trap"—a steam vehicle. It will be a great favor if you will send me the address of the firm that makes that carriage.—O. M. Frees, 341 Sandusky Street, Tiffin, Ohio.

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The illustration was that of the "original Stanley," now made by the Locomobile Co. of America, 11 Broadway, New York City.—Ed.

WANTS TRANSMISSION GEAR

Editor The Motor Age:—

I have an inquiry from one of our customers as follows: "I am looking for a transmission device for automobiles that shall have two speeds forward and one reverse, to be placed intermediate between the engine and the axle of the automobile."

Can you advise who manufactures such an article to sell to anyone. You are doubtless aware that quite a number of manufacturers of this line of goods make them only for their own machines and will not sell parts to be applied to other vehicles.—Eugene Arnstein, 86-88 West Lake Street, Chicago.

—

Write to the Automobile Supply Co., 3209 Washington Avenue, St. Louis, or the Upton Machine Co., 17 State Street, New York.—Ed.

ABOUT MOTOR POWER

Editor The Motor Age:—

I would like you to tell me if a two-cylinder gasoline engine, 3 1-4-inch bore by 4 1-4-inch stroke, running at 800 revolutions, would be large enough to drive a runabout weighing 600 pounds, mounted on thirty-inch wheels. What size and weight is used on a buggy of this size?—J. E. J. G., Memphis, Tenn.

—

The mere giving of the dimensions of the cylinder, do not give any definite indication of the horsepower that the engine will develop. An engine of these dimensions, and running at 800 revolutions should, if properly constructed, develop four to five horsepower which would be enough for a light vehicle. Very frequently, however, engines of these dimensions, develop much less power. Less than four b. h. p. would be unadvisable in even a light vehicle. The only safe plan is to test the engine. Sizes and weight vary so greatly that no definite answer is possible to this question.—Ed.

WANTS CHEAP LIGHT VEHICLES

Editor The Motor Age:—

Can you inform me if there are any piano box buggies, such as doctors could use for town and country work, run by steam or gasoline, that would sell for about $300 retail? I have several persons wanting same.—J. N. Pulford, care Canada Cycle & Motor Co., Ltd, Windsor, Ont.

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No, there are none that retail for less than $500, nor is there any prospect for motor-vehicles selling at less than that price for years to come.—Ed.

NEWS OF THE MOTOR INDUSTRY

MILWAUKEE STEAM VEHICLE

The steam automobile of which an illustration is shown is the product of the Milwaukee Automobile Co., Milwaukee, Wis. The following details of construction are furnished by the company:

Seamless steel construction of boiler, tested to 1,000 pounds cold water pressure; seamless gasoline and air tanks, tested to 500 pounds cold water pressure; injector to give water to boiler when carriage is idle and pump not working; pilot light to continue fire and working pressure of steam under same condition; super heater on boiler to give drier steam to engine and reduce exhaust; fusible plug on boiler to melt out at 500, should such emergency ever be reached; shut-off at driver's seat—of gasoline supply, to extinguish fire without leaving carriage, even going at full speed; cylinder oil pump on engine, efficient in operation; reverse lever giving any cut off; locking device on throttle valve; hubs all alike and ball bearing; lamps, acetylene, to burn sixteen hours; hood over engine (if desired) to avoid dust and wear; running gear, superior construction and heavy gage; tools, torch, oiler, pump and wrench, our own pattern, made especially for us.

MILWAUKEE STEAM RUNABOUT.

THE LINCOLN ELECTRIC CO.

The Lincoln Electric Co., of Cleveland, manufacturers of motors for electric vehicles, claim to have successfully accomplished an improvement which has been in the minds of many investigators into the electric system of automobile propulsion—that of utilizing waste power in charging the batteries, thus giving the vehicle a greater radius of action.

The result is accomplished by means of

a new motor and controller, just placed on the market, which was the subject of a recent patent granted to J. C. Lincoln of the company. The motor is described by a member of the company as having a compound-wound field, arranged so that the shunt is constant and the result is said to be obtained in two ways: First, the motor is changed into a dynamo and charges the battery whenever the carriage is running down-hill or whenever the carriage is reduced from third speed to second speed or from the second speed to the first speed. In other words, practically all the power now wasted as friction on the brakes is utilized in recharging the batteries. In descending a hill the speed of the carriage can be controlled as easily and as perfectly as on a level.

For instance, suppose a carriage having three speeds of four, eight and sixteen miles per hour. When descending at a four or five per cent grade the speed of the carriage will be about five miles an hour and the batteries will be charging at about the rate of from ten to twenty-five amperes, depending upon the weight of the carriage and the steepness of the hill. If it is desired to descend at a higher rate of speed, move the controller to the second speed and the carriage will descend twice as fast and the batteries will be charged at a corresponding increase. It is claimed that these results have been obtained in practice and can be obtained by any one with the use of this motor and controller.

Second, a still more important advantage over the ordinary series motor is that the efficiency is higher. At light loads it is claimed the efficiency is very much higher. The inventor states that it is a well known fact that a carriage driven by a series motor requires all of half and probably two-thirds as much current running down a three per cent or four per cent grade as is required when running on a level. The efficiency of a series motor is also said to be very low at less than half load.

When a carriage is running down a one-half per cent grade, for instance, the load is much less than when running on a level, but the current required by a series motor is but a little less than that required on a level. On the other hand, the motor described takes current strictly in proportion to the load, and the saving in current consumption is very great.

The inventor claims that due to the two causes mentioned, a carriage driven with a specially wound motor will travel from 20 to 40 per cent farther than the same one driven by an ordinary series motor.

A recent test of a vehicle equipped with a Riker series motor required thirteen amperes to drive it down a certain grade of about four per cent on Bond Street, Cleveland. The same carriage when equipped with the new Lincoln motor, all other conditions being the same, descended the same grade and charged the batteries twenty amperes. Descending a one percent grade the same carriage charged the batteries four or five amperes. On an asphalt street a 2,700-pound carriage equipped with a new Lincoln motor required an average of 17.5 amperes, while one of a well known make weighing 400 pounds less, requiring twenty-four amperes.

The change of the machine from motor to dynamo is entirely automatic and it is impossible for one sitting in the carriage to tell whether the batteries are receiving or recharging current in the circuit.

The general appearance of the recharging motor is similar to that of the ordinary Lincoln motor, which is used by several well known manufacturers of electric vehicles. It is made with a cast steel magnet frame with the ends turned inward to protect the field coils. To each end of the cylinder thus formed are bolted the yokes that carry the bearings. Each yoke is fitted to a shoulder turned in the end of the magnet frame so that it cannot help being perfectly central. Each yoke carries a bearing for the armature shaft and one of them carries the rocker and brush holders. The commutator is long and provides a general brush surface. These motors are of the four-pole type, provided with ball bearings, laminated pole pieces of peculiar shape, giving an excellent distribution of magnetism over the pole face, barrel wound armature and reaction brush holders ar-

ranged for graphite or carbon brushes. The motors are furnished in 1½, 2½, 3½ and five horsepower, weighing respectively ninety-seven, 147, 200 and 280 pounds.

The controller adapted to the new recharging system gives three forward speeds and two backward speeds. The distance between contacts having different potentials is great; all contacts are on the surface in plain sight. The insulation is of the best and the controller is compact as can be. The shaft is long enough to allow the handle to be placed to suit the construction of the body and seat of the carriage.

MAKING HUB MACHINES

The firm of Bardons & Oliver, Cleveland, well known in the bicycle and machinery trades as manufacturers of automatic hub making machines and bicycle hubs, and devoting considerable attention to the automobile trade, both as manufacturers of special automobile hubs and of hub making machinery. The company has lately shipped a number of the latter variety of machines to prominent automobile manufacturers for the production of their own hubs, and a recent shipment of importance was that of several large sized hub making machines to the Mobile Co. of America, which is now located in a new plant at Kingsland Point, N. Y.

LOOK OUT FOR THIS MAN

Cleveland, May 21.—William H. Williams, proprietor of the Ohio Automobile Wrench Co., doing business at 203 Bank Street, this city, was arrested Saturday on the charge of being a suspicious person. Of late a number of complaints have been received at police headquarters that the company mentioned has been advertising a new type of wrench which, it is alleged, they failed to deliver upon receipt of money. The police say that Williams has been moving about from building to building in the down town section of the city and that what little office furniture he had, has been attached for debts. About fifty letters received by him have been held as evidence.

CLOSE A NEW PLANT

The Omaha Gas Engine and Motor Co., which recently opened a factory at Twenty-eighth and Sahler Streets for the manufacture of automobiles, has been closed on three writs of attachments issued from Justice Crawford's court, says the Omaha News. The attachments secured against it are as follows: Paxton & Vierling, $351.54; W. J. Broatch, $199.30; Crane-Churchill Company, $161.58.

ANOTHER NEW FACTORY

Pottsville, Pa., is to have an automobile factory. John Reber, proprietor of a hosiery mill there, will be at the head of it. Mr. Reber has been experimenting along this line for several months, and the successful trial trip last week of a machine constructed after his plans has been the means of interesting several of his fellow-townsmen in the new venture.

The Cleveland branch of the firm of Manning, Maxwell & Moore, New York machinery dealers, has moved to a fine suite of offices at 1618-1620 Williamson building, the finest office building in Cleveland, which has just been completed.

The An-T-Phat Co. of Chicago has certified to a change of name to the Chicago Automobile Co. and to a change of business from marketing patent medicines to manufacturing motor-vehicles and appliances.

The Hanford Automobile Co. of Los Angeles, Cal., has incorporated for $6,000.

MOTOR RACING AND MOTOR PACING

WANTS A LONG-DISTANCE RACE

New York, May 19.—Walter K. Freeman, civil and electrical engineer, a mechanical expert of standing here and abroad, writes to the New York office of Motor Age suggesting an open race from New York to Chicago and incidentally states that in the event of an open contest not being feasible, he stands ready to run his steam wagon against the so-called "Pennington torpedo," mentioned in H. B. Twyford's recently published challenge.

Mr. Freeman's reply to Mr. Twyford is as follows:

"I have read the recent article by H. B. Twyford, who, with apparent earnestness, challenges the automobile world, so to speak, to compete in speed over all sorts of roads, with him and his so-called Pennington War Torpedo, offering to race this apparatus against anything and everything in the way of a motor driven vehicle.

"Almost everybody who has a knowledge of Mr. Pennington's career will credit him, to say the least, with eminent courage, and the writer believes, apart from any consideration of individuals, that it would be of considerable interest to the public at large, and especially to those interested in automobile contrivances, to have a race arranged, by which it may be determined how much power can be safely carried on wheels running over the ordinary roads.

"We all know, of course, that the Anglo-American Rapid Vehicle Co. have no vehicle that can give a fifteen per cent handicap, and few would believe that Mr. Twyford is properly informed as to a fair allowance for heavy roads. There are reasons, however, and many of them, for arranging a speed contest in this country, irrespective of the class of vehicle or the amount of power carried. I suggest that during September or October, under the auspices of the Motor Age, Motor Vehicle Reivew, and Horseless Age, that a race be arranged for to be run in this country; that the distance be limited to 2,500 miles, and a selected route between New York and Chicago would very nicely cover the distance; and it might further be suggested that the representatives of the above mentioned papers select a route that in their judgment would give an average condition of American roads, and that each competitor who enters into the speed contest pay a fee of sufficient amount to enable the committee to reimburse the builder of the successful motor driven vehicle. It would be well, perhaps, for the committee selected to formulate certain rules and lay out a route over which each vehicle must pass, and give the broadest license to the engineer in charge, so that the vehicles will have a fair test in order to prove the stability of construction, capacity to develop speed at a given cost, and generally the merit and durability of the apparatus.

"If no race can be arranged where the automobile manufacturers can fairly compete in speed, durability and general excellency of American made automobiles, then I will accept the challenge of Mr. Twyford to operate a motor driven vehicle over fair roads anywhere in the United States. I do not propose to attempt to jump fences, or run through ploughed fields, or climb trees, or anything of that sort, but will accept any one of the conditions that he suggests for a reasonable wager, and any distance he names over the highways as they may be found leading in any direction from New York or Chicago.

"As you edit one of the leading papers in the automobile world, and as my esteemed friend, E. P. Ingersoll, is the proprietor of another, and the Motor Vehicle Review is progressive and all right, I believe that the three papers referred to ought to be able to get up a pretty interesting race for the automobile manufac-

turers; and it is a fairly well determined fact that if such a race were inaugurated in this country the colors of the French automobilist would be lowered. If you wish to bring about an exhibition speed for American made automobiles it would be well to interest the manufacturers and select E. P. Ingersoll as umpire, critic of construction, merit and behavior. This would make a race exceedingly funny and not detract from the merit of the automobile per se.

"If such a race is arranged for you may count me in as one who does not want any handicap, but will undertake to race with any automobile made in this country or Europe over a road extending not less than 1,000 miles or more than 2,500."

Mr. Freeman has spent much of his time abroad and has followed the motor-vehicle industry since its conception. He has toured a motor over the most celebrated roads and has examined the leading racing machines and is thoroughly familiar with the construction of each one of them, as he recently returned from Paris.

Mr. Freeman has a steam wagon of his own, which he refuses to call an automobile and prefers to speak of it as a mere steam engine set on a wagon body. With this crude racing machine he says he has gone three miles over a measured course on the road in Union County, New Jersey, in 3:04 and has offered to buy your correspondent a dinner if he, at an early date, does not take him a measured three-mile spin in at least 3:20.

It is claimed that in a recent trial on Long Island roads the Pennington "torpedo" has gone at a gait faster than a mile a minute.

RACING IN FRANCE

Paris, May 12.—It has been definitely stated that the Paris-Bordeaux cycle race will be permitted only on condition that motor pace is not made a feature of the event. The original date was May 27, but this has been changed to June 10. Some of the riders are pleased at the change and others are highly disgusted.

Last Sunday, at the Parc des Princes Track, all the leading motocyclists started in a one-hour race. The event well illustrated the uncertainties of motocycle racing and the fact that the racing man who indulges in contests of this character should be an expert machinist, as well as a speed merchant. At the start, Joyeux took the lead from the field of ten. Beconnais was slow in getting away, having a new motor which required the constant application of lubricants in copious quantities. However, after a few laps, he got to going, and, traveling at a speed of nearly fifty miles an hour, passed one after another of his competitors and assumed the lead.

Rigal's motor went wrong, Aries had a tire explosion and both retired before they had gone three miles. Fossier had an accident of some kind that lost him a lap. Not one contestant escaped troubles of one description or another or went from start to finish of the race at anything like an even speed. Jallu's motor was not fast enough and he labored like one of the riders on the old multi-cycle pacing machines, a tried role with him, by the way.

At the tenth lap, Beconnais was a lap ahead of his nearest competitor, his motor smoking like a railway locomotive, owing to the frequent and liberal doses of oil that he was obliged to give it. He was going at top speed and seemed in a fair way to break his own 100-kilometer record, when, just after gaining his third lap, something went wrong about his ignition plug. By the time he had the break repaired and again got to going, he had lost his lead to Osmont and was third, back of Vasseur.

After scoring forty kilometers, Vasseur had a curious accident. He was going forty miles an hour when the left wheel of his tricycle came off and went flying across the track and off the bank. In some miraculous way the rider, himself, escaped a fall. The order was then Osmont, Beconnais, Fossier.

Then it was Osmont's turn to suffer. One of his tires punctured, and, not having another tire to put on, he exchanged the wheel with the injured tire for another wheel of a larger diameter. Beconnais did not gain by Osmont's mishap, however, for he had more trouble with

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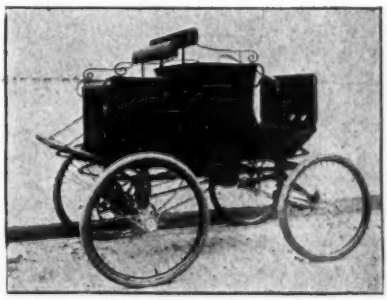

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his motor and Fossier took the lead. When the latter was well in the lead and there remained less than three minutes of the hour, his trembler went wrong and he was obliged to stop to repair it. Joyeux took the lead for a brief period, but he, too, had trouble with his motor and had to join Fossier in making repairs. Meanwhile, Osmont managed to keep his machine in shape long enough to finish with his misfit wheel, having covered thirty-eight miles, 625 yards. Fossier and Joyeux got back to the track in time to get second and third places respectively, while Beconnais was fourth almost four miles behind the winner.

It is highly improbable that any big motor races will be allowed in France for a long time, certainly not any that include the district of Seine-et-Oise, in which Paris is located. This makes it likely that the contest for the Gordon Bennett cup may be run in some other country, probably Italy, which boasts excellent roads and an abiding interest in motor racing, although the subject has not yet been taken up by the Automobile Club, but will be in a short time.

Special permits must be obtained for all motor races now and only comparatively short races in regions that are not very thickly populated are permitted. One of the events which the authorities permitted to be run was the fourth annual motocycle road race of 100 kilometers (62½ miles) from Etampes to Chartes and return on the tenth instant. Of the fifteen starters there was only one who failed to finish or was the victim of an accident of any kind, a remarkable showing.

The winner turned up in Marcellin, on his two-cylinder tricycle, who covered the 100 kilometers in the remarkable time of 1:24:58 4-5. This does not equal Beconnais' record for this distance, which is 1:22:34 3-5, made between Arles and Salem, but it does beat the record for the Etampes-Chartes course. Not only this but the last year record for this course was broken by eleven of the fourteen finishers. Barras made the second best time, Beconnais third, Tart fourth and Delisle fifth.

It is interesting to consider the times of the previous contests over this same course as showing the improvements, not only in the motocycles themselves, but in the manner in which they are handled. The winners of the four contests, with their times, are as follows:

1897, Viet, 3:09:05 4-5.
1898, Bardin, 2:21:47 2-5.
1899, Teste, 1:56:32 3-5.
1900, Marcellin, 1:24:58 4-5.

Among the other conditions of the race was one providing that the weight of the machines should not exceed 250 kilograms (550 pounds). There was a wide divergence in weights, which varied from 124 kilograms up to 248, although most of them were well under 200. The speeds of the engines varied from 2,000 to 2,500 revolutions per minute and the reduction gearing brought down the speed in the driving wheels only about one-third. As these driving wheels average thirty inches in diameter, it will be seen that the racing machines are not designed to travel at a snail's pace.

NOTES OF INTEREST

Beam and Denniston will meet in a five-mile motor paced race at the meet of the Parkside Wheel Club at Buffalo Athletic Field, May 30.

Bennie Monroe rode ten miles back of pace last season in his first attempt in 16:50 and he feels that he should be in the game this year. Thus far he has done none but unpaced work, but with his new motor he will start training this week.

In and around Boston will be a happy hunting ground for the pace followers and motor teams. In and around Baltimore will be another happy hunting ground. In and around Newark will be headquarters for the sprinters and Buffalo will be another central point.

Earl Kiser, for two consecutive miles followed pace at a 1:40 clip and he was pleased also. At the close of his ride he said: "I am small—next in size to Michael among the racing men—and essentially a big gear man. With the large gear I am convinced that I can follow pace as fast as any of them. I use the small gear only for sprinting and not from choice. When it comes to vitality I believe I have as much as any one else. I was strong enough as a lad to hold the fifteen-mile world's road record. In plugging races I was always

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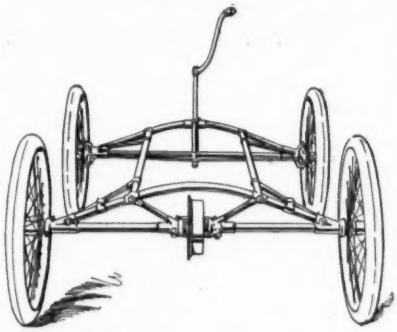

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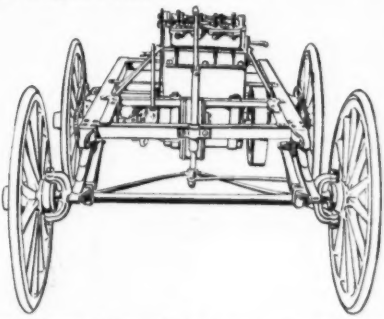

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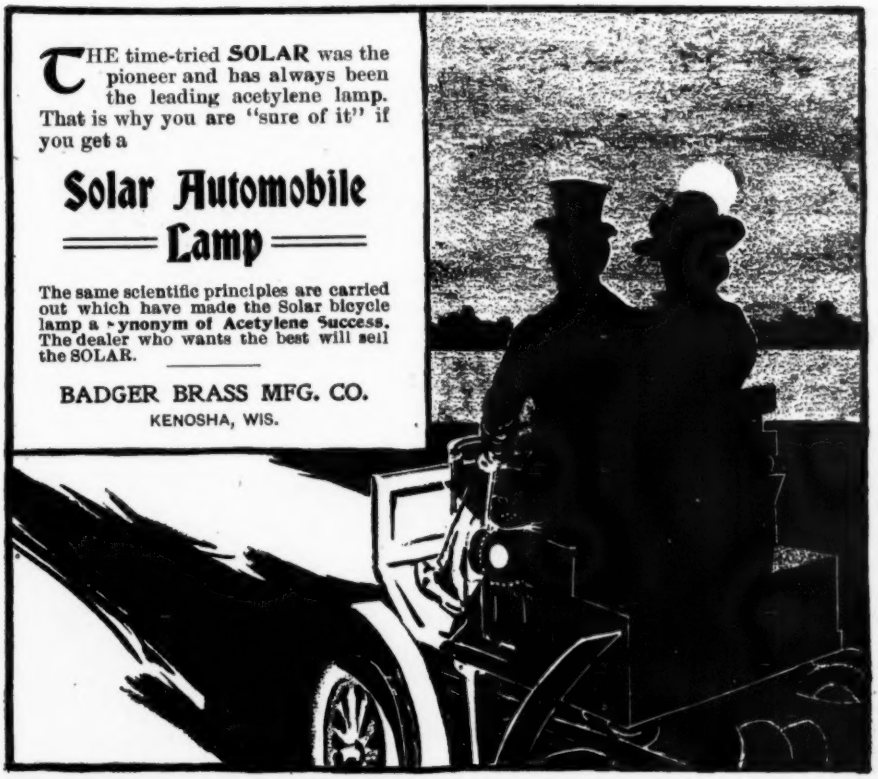
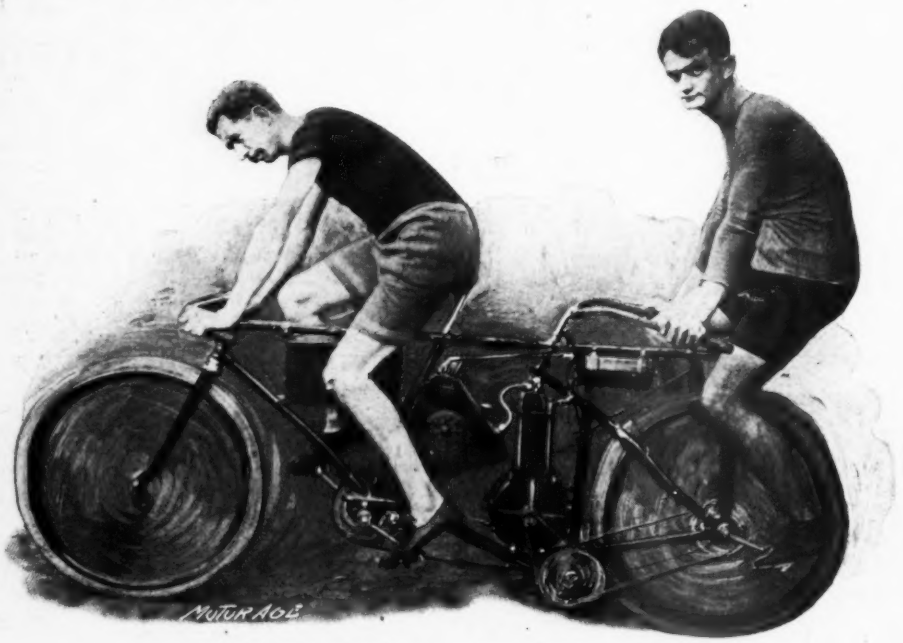


right there. I never knew what it was to get tired on the road. Yes, I would like to go back of pace."

H. B. Hillis, Jr., has taken the management of both the cycle tracks at Providence and on May 30 he will open the Crescent Park Track with a meet. Every Sunday and every holiday thereafter there will be a meet in Providence. The tracks will alternate in dates for the Sunday and holiday meets.

Charles Henshaw is inconsolable over the loss of his star, Harry Caldwell. The Manchester giant fell and broke his collar bone. Henshaw had arranged for him a long list of races during June. Caldwell was traveling faster than any other man around Boston. He will now be out of it until some time in July.



JUDGE AND STONE ON THEIR MOTOR TANDEM.

The failure of many of the motor teams to equip themselves in time for May 30 was unfortunate for meet promoters as well as the riders. The promoters looked to the holiday to open up their season and were quite naturally anxious to exhibit the new class of sport to the holiday crowd, to interest it in the season's racing to follow. Quite a number of the riders did not go to the regular builders of motors, but secured the motors elsewhere and then attempted to fit them to machines of their own designing. The application of a motor to a tandem is a delicate piece of work and failure, of course, resulted in many instances.

Floyd A. McFarland is anxious to follow Harry Elkes, the American middle distance champion, to Europe, to compete in the great middle distance races. McFarland, in following out his announced intention of devoting his attention to the middle distance racing first, left Louisville Wednesday of this week and will, after a day of sprint racing at Newark Sunday, go on to Waltham, where he will locate. The big Californian intends to fit himself out with two fast motors. "I have my own plans for training for the game," said he, "and I am not anxious to get in with the bunch at Charles River. I of course want to be in that neighborhood, for that will be where the matching for the early part of the season will be done." McFarland is beginning now to feel like himself again. He says that the change in his feelings this spring was caused by his early use of a ninety gear. He was only using eighty during the spring of last year and did not increase his gear for sprint racing until well along in the season.

The men of the sprinting class do not believe that they take any risks in mixing their work. Harry Elkes, in all of his middle distance days, proved, again and again, that he was able to sprint against the best of them. Major Taylor sprinted and rode

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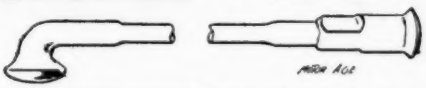

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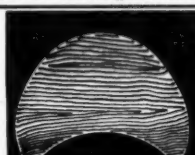

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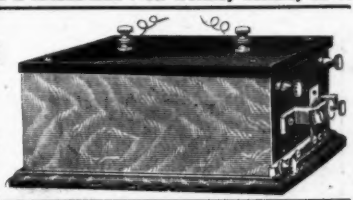

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middle-distance races day after day. He rode a middle-distance race with honors one day and won a quarter-mile championship the next.

There can be no doubt at all that those chums of the cycle path, Tom Cooper and Earl Kiser, have caught the middle-distance racing spirit. Cooper recently rode five miles, in third position back of the motor, in 9:30, the fastest five miles he has ever ridden. For years he was the King of Belle Isle, the greatest road racing course in the world. He defeated all of the best men of the country in the old Hilsendegen road races. He is essentially a stayer and is sure.

Jimmy Michael will tour the country in July, racing any riders who may appear. He is being managed by a company known as the Madison Square Garden Jubilee Co., according to a Louisville paper, which reports his intention of reaching Louisville about July 15. It is probable that Jim Kennedy is the real manager, the latter being upon the paper of the Ethiopian Amusement Co., promoters of cake walks throughout the country, of which Mr. Kennedy is the manager. Michael's appearance in the west will be hailed with delight.

One-and-three-quarter-horsepower is a lot when it is driving a motor tandem with two scared men, over hillocks, across ditches and through long grass. At least Davis and Kutzkau are disposed to think 1¾-horsepower sufficient now. They have reason, for Davis steered a motor over the pole last Thursday at Fountain Ferry. Kutzkau, forgot his mission as motor man. He saw before them the judges' stand which seemed a barn. So did Davis and he just skipped it as he started a field with a yell. Davis wanted his mate to stop the motor but the latter was looking for a soft place to land. Davis kept his head as the bucking machine took the field. He steered right to avoid the bank which might have been dangerous if taken at an angle. For 200 yards the speed kept up, both men hanging on for dear life. One and then the other went up in the air but both hung to the bars. Stone, an old timer, tore round the track yelling to the motor man to "pull the plug." This Kutzkau finally did and the machine slowed down uninjured. The riders were white to the ears. Both intimated that the other did it, but both refused to get up with any one else again that day.

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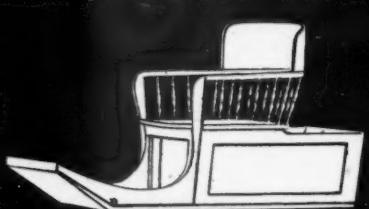

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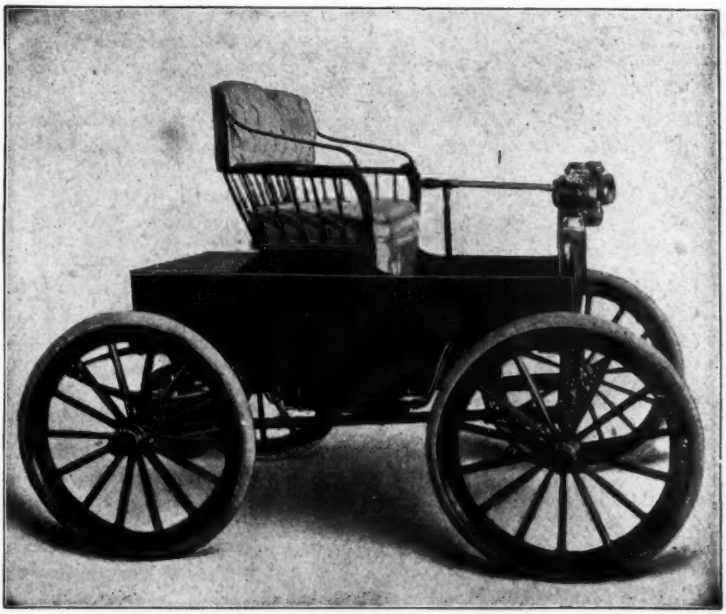

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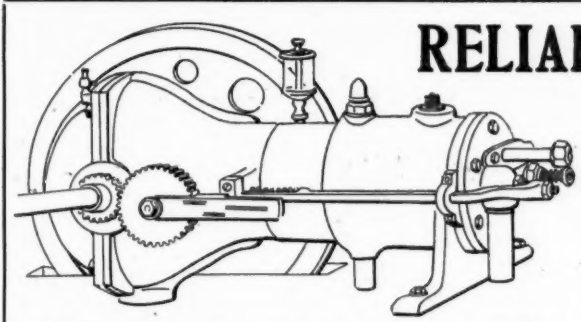

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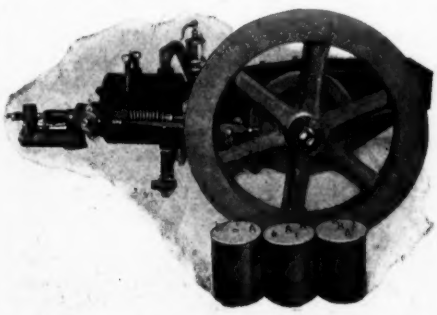

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